



ABOVE • This is your brain on TYCWD. See coverage starting at right. PHOTO: JOSIE ANDERSON

features

Meet the Emperor of All Lecture Attendees

Nutritionist Offers DASH Diet Tips

Era of Escalators in Bldg. 31 Ends

NIH Invests in IT Upgrades

departments

Briefs	2
Feedback	5
Digest	11
Milestones	12

nih record

NIH Celebrates Take Your Child to Work, Earth Day

By Eric Bock

Thousands of students took part in the 20th NIH Take Your Child to Work Day (TYCWD) and Earth Day celebration on Apr. 23.

This year, NIH hosted more than 3,600 youngsters enrolled in grades 1-12. Students could participate in 149 activities to learn about the work conducted at NIH. Of these, 111 took place on campus and 38 occurred off the premises. NIH also celebrated Earth Day on the Bldg. 1 lawn.

"We're pleased to have so many students participate this year," said Timothy Tosten, director of ORS's Program and Employee Services, which organized TYCWD. "They saw the incredible things that happen at NIH—whether it's in labs and offices or at

SEE TYCWD, PAGE 8



Dameon Thomas, 11, creates a small tornado of water at the weather display during Earth Day at NCI Shady Grove. PHOTO: DANIEL SONE



Dr. Mrinal Dewanjee may be smartest NIH'er.

The Smartest Person at NIH?

By Rich McManus

If Dr. Mrinal Dewanjee is not, in fact, the smartest person at NIH, he may be the best educated. That's because, using NIH's online Calendar of Events as a planner, he helps himself to between 5 and 10 scientific lectures each week.

So ubiquitous an attendee—and participant, by way of the questions he often asks—is Dewanjee that he probably ought to have a

SEE SMARTEST, PAGE 6

Doctor, Reporter Recounts 34 Years Of Covering AIDS Pandemic

By Dana Talesnik

With all we now know about AIDS and how to prevent it, a staggering number of people still are contracting and dying from the disease. In the United States alone, more than 1.2 million people are living with HIV and nearly 14 percent of them don't realize they're infected, according to the Centers for Disease Control and Prevention.

When AIDS was first discovered 34 years ago, there was much fear, stigma, skepticism and misinformation among the medical community, media and the public. Dr. Lawrence K. Altman has a unique perspective as a physician and journalist who wrote the first *New York Times* story on AIDS in 1981 and has since written more than 900 AIDS-related articles as



Dr. Lawrence Altman

SEE ALTMAN, PAGE 4



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NIH...Turning Discovery Into Health

briefs

8th Annual NIH Take a Hike Day, June 4

Come and join this year's official starter NIH director Dr. Francis Collins for the 8th annual Take a Hike Day. If you have not participated in the past, consider it this year.

Meet your coworkers and make new friends while exercising.

All NIH employees and contractors are invited to participate in the walk/fun run on Thursday, June 4 from 11:30 a.m. to 1:30 p.m. You can run or take a leisurely stroll around the perimeter of the NIH campus (approximately 3.2 miles—remember to bring your badge) while taking in the sights and sharing some laughs with your coworkers. The event will be held rain or shine. Although all employees and contractors are encouraged to participate, obtain your supervisor's approval before registering. Take a Hike Day is a voluntary event.

To register go to www.ors.od.nih.gov/pes/dats/wellnes/hike/Pages/hike.aspx.

Individuals who need reasonable accommodation to participate should contact Carole Harman at harmanc@ors.od.nih.gov, (301) 402-8180 or the Federal Relay (1-800-877-8339). Requests should be made at least 5 days before the event.

The event is sponsored by the NIH Office of Management in partnership with the Office of Research Services, Division of Amenities and Transportation Services.

Author Sinek To Present at DDM Seminar

The Deputy Director for Management (DDM) announces the final DDM seminar of the 2014-2015 series "Management and Science: Partnering for Excellence." The event on Thursday, June 4 from 10 a.m. to 11:30 a.m. in Masur Auditorium, Bldg. 10, will feature Simon Sinek, who will discuss "Inspiring Trust and Loyalty in Organizations." He will explain how leaders can inspire cooperation, trust and change.

Videocasting and sign language will be provided. Individuals who need reasonable accommodation to attend should contact the NIH Training Center at (301) 496-6211 or the Federal Relay Service at 1-800-877-8339.

For more series information, visit www.ddm-series.od.nih.gov or call (301) 496-3271.

Employee Survey: What's Your View?

Are you interested in helping make NIH a more engaging and fulfilling place to work? We want to hear from you. The 2015 Federal Employee Viewpoint Survey (FEVS) opened May 5 and will close on June 12. The theme is "Employees Influencing Change." It is an opportunity for federal employees to provide feedback by rating their level of engagement and satisfaction in a variety of performance categories such as work experience, work/life programs, leadership, diversity and inclusion. NIH values your feedback and uses the results to promote positive changes throughout the organization. It is one of the fundamental ways in which the NIH community learns how to improve as both a place to work and as an agency that sets standards of excellence in medical research.

Eligible NIH employees onboard with HHS on or before Oct. 31, 2014, should have received an email invitation from the Office of Personnel Management to participate in the FEVS. The survey takes about 25 minutes to complete and responses will be confidential. Take a few minutes to share your perspective between now and June 12. For those who have already completed the survey, thank you for taking time to respond and helping ensure that NIH excels at providing a safe, effective and engaging workplace for all employees.

For questions about the FEVS, contact Evans Aine at aine@od.nih.gov or Allison Kruszewski at kruszewskial@od.nih.gov.

Butte Lectures on Precision Medicine, June 3

The next talk in the National Library of Medicine Informatics Lecture Series is "Data-Driven Precision Medicine" by Dr. Atul Butte on June 3 from 2 to 3 p.m. in Lister Hill Center Auditorium, Bldg. 38A.



Butte is founding director of the newly established Institute of Computational Health Sciences at the University of California, San Francisco, and a professor of pediatrics. His lab builds and applies computational tools to convert hundreds of trillions of points of molecular, clinical and epidemiological data collected by researchers and clinicians worldwide over the past decade—now commonly known as "big data"—into new diagnostics, therapeutics and insights into rare and common diseases.

The talk will be broadcast live and archived at <http://videocast.nih.gov/>. Sign language interpreters will be provided. Individuals who need reasonable accommodation to participate should contact Ebony Hughes, (301) 451-8038, Ebony.Hughes@nih.gov or the Federal Relay (1-800-877-8339).

nih record



Kathryn McMurry, NHLBI's nutrition coordinator

NHLBI Nutritionist Offers DASH Diet Tips

By Eric Bock

Substitute brown rice for white rice, skim milk for whole milk and vegetable oils for butter. Gradually, eat more fruits and vegetables.

These are just a few of the suggestions that Kathryn McMurry, NHLBI's nutrition coordinator, gave to those who are thinking about following the Dietary Approaches to Stop Hypertension (DASH) diet. She spoke on "Make the DASH to Heart Health," recently in Bldg. 1's Wilson Hall. DASH just happens to be the top-rated dietary plan in *U.S. News and World Report's* annual survey of healthy diets and has topped its rating for years.

"The diet emphasizes vegetables, fruits and whole grains," she said. "It includes fat-free and low-fat dairy products, fish, poultry, beans, nuts and vegetable oils. And it limits sweets, sugary beverages and red meats."

Based on studies supported by NHLBI, the DASH diet is moderate in overall fat, low in saturated and trans fats and high in vegetables, fruits and low-fat dairy foods. The diet has been shown to lower blood pressure and LDL cholesterol, which, in turn, can lower the risk for cardiovascular disease.

Although the diet wasn't developed specifically for weight loss, "it can certainly be used as a weight loss diet because it's rich in naturally low-calorie fruits and vegetables. These foods help you feel full longer," McMurry said.

Compared to the typical American diet, she noted, the DASH diet is moderate in total fat and carbohydrates and lower in saturated and trans fats (manufactured fats linked to heart disease and cancers). It's also rich in nutrients such as potassium, magnesium and calcium.

"It doesn't require any special foods and it doesn't require that you avoid any specific foods," she said. "It can be adapted to what you like to eat."

McMurry recommended adopting the diet over a couple of weeks because it takes time to get used to eating more fiber.

"You can start by adding vegetables or fruit to a meal or snack," she advised. "So, if you're

currently eating half a cup of vegetables for dinner, try increasing the vegetables to a cup."

She also suggested cooking with vegetable oils instead of butter or margarine, substituting whole wheat bread for white bread and gradually shifting to fat-free dairy products. Meat should be considered a side dish, not a main dish, she said.

McMurry emphasized "you don't need to give up snacks or desserts, but we recommend that you make healthier choices." For snacks, that means eating raw fruits and vegetables, popcorn or low-fat string cheese. For dessert, options include low-fat yogurt, berries and granola.

For those trying to lose weight, decreasing portion size and exercising at least 60 minutes per day are "really important."


NHLBI's web site includes resources on the diet. The publication *In Brief: Your Guide to Lowering Your Blood Pressure with DASH* provides information about serving sizes based on calorie levels and includes an activity tracker. The web site also features more than 180 heart healthy recipes.

"The U.S. Department of Agriculture's choosemyplate.gov also has a wealth of information and tools," McMurry said. "There's a very detailed diet tracker where you can log in and keep track of what you're eating each day. It doesn't directly line up with the DASH diet, but it generally lines up with the dietary guidelines."

It's getting easier to eat healthily on campus, she noted, "thanks to the efforts of our dining services staff, chefs and dietitians." They've developed entrees and side dishes called "Sensible Selections" that are lower in calories, saturated fat and sodium.

For those who have trouble sticking to a diet, McMurry recommended meeting with a registered dietitian. Dietitians advise people on what to eat, based on their food preferences and lifestyle.

"Even if you have just one or two sessions, it could get you started on a diet plan," she added.

The lecture was sponsored by the Office of Research Services, Division of Amenities and Transportation Services, in partnership with the NIH Health and Wellness Council and NHLBI, as part of the "Focus on You" lecture series. 



NIDA Director Keynotes Congress in Spain

NIDA director Dr. Nora Volkow recently met with clinicians, patients and volunteers at the Center of Proyecto Hombre, a drug addiction treatment facility in Barcelona, Spain. She was in Barcelona as the keynote speaker for the IV International Congress on Dual Disorders and Dual Pathology, which took place Apr. 17-20. She presented "Brain Addictive Circuits Are Common to Other Mental Illnesses" to an audience of 2,000 attendees from 70 countries and led a general session on the topic of "ADHD and Addictions, a Pattern of Dual Disorders." Volkow is shown above (front, fifth from l) with patients, their families, staff and volunteers at the center.

ALTMAN

CONTINUED FROM PAGE 1

Right:

"Health officials did not learn from the AIDS experience how to communicate as effectively as they should to educate the public about the strengths and weaknesses of epidemiology and understanding risk interpretation," said Altman.

PHOTOS: BILL BRANSON

information and interventions unfolded.

In the early 1980s, journalists considered AIDS an ephemeral syndrome, certainly not a disease that would become one of the worst pandemics in history, said Altman at the 11th annual NIAID-sponsored James C. Hill Memorial Lecture held recently in Lipsett Amphitheater.

"No sooner had the ink dried on my July 3, 1981, article ["Rare Cancer Seen in 41 Homosexuals"] than many gay men and at least one journalist ridiculed it," said Altman, *Times* medical writer, senior scholar at the Woodrow Wilson International Center for Scholars and clinical professor of medicine at New York University. "A columnist for the *Village Voice* complained that my article wrecked the gay community's July 4 weekend for no good reason."

Back then, many in the medical community remained unconvinced that AIDS was an infectious disease, one that might be caused by an unidentified microbe, said Altman. But soon, with cases emerging among intravenous drug users and blood transfusion patients, doctors began suspecting a virus transmissible through body fluids.

"In the early years of AIDS...I rounded on AIDS cases at a number of hospitals and laboratories around the country," recounted Altman. "The stigma was great. In some hospitals, food trays lay untouched in the hallways outside patients' doors. Staff would not enter the room for fear of getting AIDS."

In the journalism world, which includes medical and scientific journals, misinformation abounded. Doctors and journalists overlooked possible causes; their articles, even those in scientific journals, contained errors and omissions. "Arguably, such restrictions [on when journalists could report findings] helped delay thinking about and identifying the causative infectious agent," said Altman. "It led some scientists to run down blind avenues."

A breakthrough came in 1983 and 1984, when doctors in Paris and Dr. Robert Gallo's team at NCI separately published research on a virus each had found in several AIDS patients. A battle of scientific and national pride ensued. An international commission named the agent HIV (human immunodeficiency virus) and the French team later won the Nobel Prize for its discovery.

In 1985, AIDS began to ravage Africa and the *Times*' executive editor asked Altman to report from the field. But African officials denied that there were any AIDS cases and several African consulates refused him a visa. He eventually got visas and visited Kenya, Rwanda and Zambia. Altman found that ignorance about AIDS was widespread among African officials. Even U.S. officials working in these countries were not informed about AIDS. In Nairobi, Altman said he saw confirmed AIDS patients, yet Ministry of Health officials continued denying AIDS existed there.



"Almost everywhere I went, or tried to go, I met political opposition [yet] AIDS cases were abundant in the hospitals," said Altman. "On rounds at the central hospital in Kigali, we had to dodge the pots and other items thrown by menacing patients...Although the doctors welcomed me, many patients did not."

By the mid-1990s in the U.S., drugs such as AZT, antiretroviral therapies and protease inhibitors would begin to save countless lives. But the drugs were expensive and unaffordable in poor countries. Today, there are more than 30 effective drugs to treat HIV and, thanks to pressure placed on pharmaceutical companies, drug costs dropped dramatically in poorer countries.

While AIDS cases have declined from their peak years, about 50,000 new infections occur annually in the U.S. According to the CDC, as many as 70 percent of HIV-infected people don't have the virus under control. Globally, in 2013 alone, 2.3 million people were newly infected and now are among 35 million others living with HIV; 1.6 million died.

"These statistics obscure the fact that each number was a human who had a name," said Altman.

Today, there is still no effective AIDS vaccine. Meanwhile, some of the lessons of AIDS have gone unheeded, as evident in the Ebola epidemic in West Africa.

"Health officials did not learn from the AIDS experience how to communicate as effectively as they should to educate the public about the strengths and weaknesses of epidemiology and understanding risk interpretation," said Altman. Journalists face that challenge too, he said, as they try to inform the public and avoid creating panic without downplaying the risks.

The AIDS pandemic did lead to improvements in medicine and public health, said Altman. Health officials have improved infection control standards in hospitals, labs and offices. Lab tests for HIV and other infectious agents have helped hospitals improve the safety of the nation's blood supply.

"It was a sea change in attitude and behavior," said Altman. "The aim is to avoid repeating the same errors and to be alert to other new and emerging diseases." ●

feedback

Have a question about some aspect of working at NIH? You can post anonymous queries at www.nih.gov/nihrecord/index.htm (click on the Feedback icon) and we'll try to provide answers.

Feedback: NIH needs better signs leading to the different buildings. Recently I had to drive to campus, something I rarely do, and I got so lost trying to find the building I needed to go to because there are not enough signs.

Response from the Office of Research Facilities:

A few years ago, the Office of Research Facilities realized existing signage on campus was both outdated and unsightly. With the belief that less signage was better than continuing to misinform visitors, many of those inaccurate signs were removed. Concurrently, ORF developed a comprehensive campus-wide signage and wayfinding plan. Regretfully, the signage plan was deemed unaffordable when compared with more critical needs such as central utilities, issues affecting patient or animal safety and critical building systems.

Until such time as the signage plan is funded, ORF will work to ensure maps on the NIH web site are updated and staff at Gateway Center have maps available for visitors, including instructions for those with accessibility needs. And, with the increased use of mobile devices, ORF will strive to optimize maps for use on smartphones, including adding a new 3-dimensional view of the campus.

Feedback: I heard a rumor that all staff will be moved out of the Rockledge buildings and possibly to locations far from the Bethesda campus. Is this true? What is being planned for the staff currently located at RKL 1 and 2?

Response from ORF: There are three large office replacement actions under way.

- The existing leases are on 6100 Executive Blvd. and 6701 and 6705 Rockledge. The delineated area for the replacement leases is the entirety of suburban Maryland, which includes Montgomery and Prince George's counties. NIH director Dr. Francis Collins has requested GSA to reconsider the delineated area and we await a reply from GSA.

- One of the replacement leases involves 5635 Fishers Ln. That delineated area will be smaller and will consist of the Executive Blvd., Rockledge and Twinbrook areas.

Feedback: (Two questions) The escalator from the B3 level of Bldg. 31C to the B2 level has been out of

service for months. I assume the reason is that because it is so old, parts can't be found. If that is the case, when will that escalator be replaced and in the interim, why can't it be used as a staircase? Frequently there is only 1 "C" wing elevator operating and when ICs hold big meetings that single elevator is full of people coming and going to the 6th floor. It can be very helpful to take the escalator up to the B2 level and use the "B" wing elevators.

Will the short escalator from 1 to B2 in 31 (B wing) ever be working? It has been out of order longer than a Metro escalator.

Response from ORS and ORF: No. Due to the age of the escalators, repair parts for both escalators in Bldg. 31 are no longer available. In addition, the escalators do not meet safety requirements to pass an annual safety inspection. The B wing escalator is slated for demolition this summer. The long term plan for the C wing escalator also calls for its removal.

The removal of the B wing escalator will provide additional space for a consolidated ID badge enrollment and issuance office in one location. Construction is scheduled to begin later this year. 📍

NAS Elects Two NIH Scientists

Two NIH scientists are among the 84 new members and 21 foreign associates from 15 countries named to the National Academy of Sciences on Apr. 28 in recognition of their distinguished and continuing achievements in original research.

Dr. Alan G. Hinnebusch is chief of the Laboratory of Gene Regulation and Development and director, program in cellular regulation and metabolism, National Institute of Child Health and Human Development.

Dr. Warren J. Leonard is NIH distinguished investigator and chief of the Laboratory of Molecular Immunology, and director, Immunology Center, National Heart, Lung, and Blood Institute.

Those elected bring the total number of active members to 2,250 and the total number of foreign associates to 452.

The National Academy of Sciences is a private, non-profit institution that was established under a congressional charter signed by President Abraham Lincoln in 1863. It recognizes achievement in science by election to membership and—with the National Academy of Engineering, Institute of Medicine and National Research Council—provides science, technology and health policy advice to the federal government and other organizations.



Dr. Alan G. Hinnebusch



Dr. Warren J. Leonard

Calling All Storytellers

StoryCorps, a national oral history project, is returning to the Clinical Center May 27-29 and June 4-6 to preserve voices of our community—and you are invited to participate. StoryCorps (<http://storycorps.org/>) is not a journalist interviewing you, but rather 40 minutes of meaningful conversation between you and someone you know well: a family member, friend, coworker or caregiver. It's an opportunity to ask questions that matter and preserve your stories for future generations. Anyone can participate: patients, families, researchers, doctors, nurses, staff, volunteers, etc. If you or someone you know may be interested in having your story recorded and archived, check out the web page at www.nih.gov/about/storycorps/.

SMARTEST

CONTINUED FROM PAGE 1



Asked if he ever falls asleep at a talk, Dewanjee replied, "Never! Never, when the work is exciting. Only if the lecture is boring."

PHOTOS: BILL BRANSON, RICH MCMANUS

"Reserved" seat down front for all events held in Masur Auditorium, Lipsett Amphitheater and Kirschstein Auditorium.

If you go to talks at NIH, you've seen him—with his signature mop of white hair and a skip in his step. He is convinced, after a life in science, that nirvana may be only a lecture away. Like a physicist hungering for a Grand Unified Theory, Dewanjee wants mostly to know how that thing between his ears works.

"I want to understand my brain!" he says. "I want to know why a beautiful woman, or a great scientist, sticks in my hippocampus."

Although he has only been at NIH—"the greatest place in the world"—for about 10 years (and officially retired since 2005), it can seem like more since he is ingesting what this place has to offer at such a prodigious pace.

"How can I learn things faster if I don't go to lectures?" he wonders. "I know it is a humble, futile effort, but I learn something at every lecture. I am connecting this puzzle, this maze. I have to fill in the gaps in my knowledge. I like to play with medicine and biology to make things work."

The play began somewhere between 74 and 76 years ago—he doesn't know which birth date is accurate, so like a scientist, he adopted 75 as his current age—in Burma, now Myanmar. Shortly after his birth, Dewanjee's family migrated to Bangladesh and later to India in 1971.

Early in his life, teachers recognized his aptitude for science. But his family was poor, so "after high school, I was on my own," said Dewanjee. "My father could not support me."

He got a scholarship to Dhaka University in India, where he studied chemistry, earning both undergraduate and master's degrees. He taught inorganic chemistry at the college level for a year, then went to McGill University in Canada, where he switched to nuclear science for his Ph.D.

"I learned my biology by attending lectures," he says. "I never had it in my life, not even in high school."

Dewanjee made his mark in science by using his knowledge of chemistry to make new metal complexes useful in imaging damage to the heart muscle following myocardial infarction (MI). Much of his work has involved solving the problem of unwanted blood clotting in artificial

hearts and lungs. He and his colleagues introduced radioactive metal-complexes that played a critical role in diagnosing MI and stroke. They also pioneered the use of radiolabeled platelets in studies of thrombi and emboli.

"Precise measurements with radiolabeled probes and cells helped us to make proof-of-principle that worked and quickly discard hypotheses that did not," Dewanjee explains. "We also assisted in the withdrawal of the use of cancer-causing Teflon particles in patients with urinary incontinence."

He jokes that his "15 minutes of fame" took place in 1974, while he was at Harvard Medical School. He and a coauthor published "Cellular Necrosis Model in Tissue Culture: Uptake of 99m Tc-Tetracyclines and the Pertechnetate Ion" in the *Journal of Nuclear Medicine*.

"How can I learn things faster if I don't go to lectures? I know it is a humble, futile effort, but I learn something at every lecture. I am connecting this puzzle, this maze. I have to fill in the gaps in my knowledge."

The paper meant something to Dewanjee mainly because of its promise of improving patient care—his technique might someday relieve human suffering. What he calls "the goal of translation" continues to inform his choices of lectures to attend at NIH—not as keen on basic science, he wants chiefly to know "How does this help the patient? I like speakers who relate their work to the pathology of disease."

Does he ever fall asleep at a talk? "Never! Never, when the work is exciting. Only if the lecture is boring."

If he happens to be on travel, Dewanjee is not averse to watching a talk on videocast, but that is not his preferred method of feeding.

Dewanjee has the leisure to set attendance records at lectures because he retired from the Clinical Center's radiology department. Since then, he has been a volunteer at FDA's Cell and Gene Therapy lab, teaching imaging methods to FDA staff at its Mouse Imaging Facility. In 2010, he joined NEI's Neurobiology, Neurodegeneration & Repair Laboratory under the direction of Dr. Anand Swaroop in Bldg. 6. The frustrations Dewanjee has encountered there in attempts to replace retinal cells with

photoreceptor cells have prompted him to learn ferociously. The sting of failure has prompted his obsessive self-improvement.

Using cells labeled with green fluorescent protein and a charge-neutral gadolinium complex to enhance MRI, he has conducted studies of the uptake of this complex in neural stem cells after injecting them in the mouse brain, but with aggravating results.

"I will work until I find an answer," he says. "I am learning genetics, which is a new field for me."

The long curve of Dewanjee's learning has touched on many significant nodes, including postdoctoral work at Amherst College and faculty positions at Rensselaer Polytechnic Institute, Brigham Hospital/Harvard Medical School, Tufts University, the Mayo Clinic, the University of Miami School of Medicine, the University of Illinois at Urbana-Champaign, and research positions at NIST, FDA and, finally—and most gratifyingly—NIH.


If his resume reflects the rebel, that's only because following his nose has always been paramount with Dewanjee. "No one told me what to do," he reflects on a life governed by curiosity. "Sometimes I change my field. Now I can learn in my own way—no grants and no teaching."

He credits the residents he taught at Tufts, Mayo and Miami with improving his own skill as a speaker (he gives half a dozen talks a year when he visits India). "They used to criticize me after my presentations," he recalls. "You speak too fast. You have an accent, too."

An aficionado of the art of lecturing, Dewanjee has his personal favorites. Topping the list are Dr. Valentin Fuster, a professor of medicine and cardiology at Mt. Sinai Hospital, and heart surgeon Dr. Y. Joseph Woo of Stanford.

Though most of Dewanjee's research career has involved the heart—which he tends to dismiss now as a mere pump—his "ultimate goal is to understand how the brain works. I want to understand the whole eye and the whole brain, as long as I live."

A self-proclaimed "ambassador of good health," Dewanjee works out daily, riding his exercise bike and hustling up Center Dr. from Bldg. 6 to lecture halls in Bldg. 10 and Bldg. 45.

Next time you sit in an NIH auditorium, look down front, past the postdocs, the clinicians and those skiving off for an hour in hope of scoring post-talk cookies. There you will find the most optimistic man of indeterminate age on campus, and perhaps NIH's smartest person. 

Weiss Named Division Director at NIDA

Dr. Susan R.B. Weiss will lead the Division of Extramural Research, a newly formed division at the National Institute on Drug Abuse. In addition to overseeing NIDA's extramural research grant program, the division will carry out NIDA's research training and early career development program and lead NIDA's involvement in trans-NIH initiatives that include Collaborative Research on Addiction at NIH, the Adolescent Brain Cognitive Development study and Brain Research through Advancing Innovative Neurotechnologies.



As DER director, Weiss will establish scientific priorities and strategic goals for the institute's extramural research programs; manage the concept and peer review of all NIDA grant applications in coordination with NIH's Center for Scientific Review; and coordinate and lead activities of the National Advisory Council on Drug Abuse.

"Dr. Weiss has shown exceptional talent in every position she has held here at NIDA and is the perfect choice for this immensely complex leadership position," said NIDA director Dr. Nora Volkow. "She has a strong knowledge of addiction science and understands the challenges related to the grants process. She is also enormously skilled in the intricacies of science policy related to drug abuse issues."

Weiss first came to NIDA in 2002 as a health scientist administrator working in the Science Policy Branch, where she became chief the following year. In 2011, she was asked to serve as acting director of the Office of Science Policy and Communications, overseeing all of NIDA's interactions with its many stakeholders—students, researchers, community groups, the media, Congress, other NIH institutes and Department of Health and Human Services agencies and the White House Office of National Drug Control Policy. In 2012, she was asked to join NIDA's executive leadership team as associate director for scientific affairs, providing guidance and oversight on scientific matters relating to program development, management, research training and science planning.

Weiss received her Ph.D. in psychology from the University of Maryland and earlier in her career was chief of the unit on behavioral biology at the National Institute of Mental Health, later serving as senior director for research for the National Mental Health Association. She is one of NIDA's foremost experts on the complex science of addiction, marijuana science and policy and the many factors contributing to the nation's prescription drug abuse problem.

"Throughout my professional career, I have worked across the spectrum of basic, clinical and translational research where science, communications and science policy meet," said Weiss. "I am excited about my new role that will focus on the science we support through extramural grants and on strengthening the already robust collaborations between NIDA's scientific interests and those of other NIH institutes and centers."

NIDA administers more than \$775 million for about 2,000 grants through funding opportunity announcements and research training programs.



TYCWD

CONTINUED FROM PAGE 1

Above, from l:

Isabella Jacobs (c) takes her turn on the treadmill. At left is Amelia Tarlton, a student volunteer, and at right is physical therapist Zavera Brandon.

Owen Older looks through a microscope.

Arnav Singh bravely holds a tarantula at the Earth Day celebration.

Below:

CC PACU (post-anesthesia care unit) nurse manager Nilka Lavergne and Charlotte Holbrook are ready to step into the operating room.



the bedside. We hope children's experiences inspire them to think about a career in biomedical research or the many fields that support it."

At the Clinical Center, youngsters tested their grip strength and ran on a treadmill at the rehabilitation medicine department, toured an operating room and learned about the effects alcohol has on the brain. Elsewhere on campus, they participated in fitness classes, conducted science experiments and learned about the police department's canine units.

One of TYCWD's organizers, ORS's Courtney

Bell, said new activities included "a technology sandbox" at the NIH Library where students could view new technology such as a 3D printer; a science fair sponsored by FAES; and informational sessions for high schoolers about how to apply for NIH internships.

Another new feature of TYCWD was a Twitter scavenger hunt. Participants were encouraged to share their experiences via social media by taking photographs of people and places around campus and tweeting their photos to the NIH Employee Services Twitter account, @NIHEmplSrvcs, with the hashtags #PES-

Collins, Tabak, Rockey Mix Science with Fun in Bldg. 1

It is a rare day when kids of NIH'ers have the opportunity to rub elbows with NIH top brass, prove that they are the progeny of brilliant scientists and skilled administrators and boldly cuddle large insects without panic. Such was the case at Wilson Hall in Bldg. 1 when children, along with their parents and guardians, filled the room to participate in TYCWD sessions arranged by the *OD Voice*.

Following a brief introduction in which Dr. Sharon Milgram, director, Office of Intramural Training and Education, engaged kids in a discussion about Earth Day, NIH director Dr. Francis Collins entered the room to a chorus of children in unison calling out, "Hi Dr. Collins."

Children were rapt with attention as Collins spoke about the importance of biomedical research and NIH accomplishments.

Next up was the Science Bowl led by Dr. Lawrence Tabak, NIH principal deputy direc-



Jonathan Sun (c) shows off an NIH logo made by a 3D printer. Also pictured are Nathan Han (l) and Christian Testa.

tor. Children used electronic clickers to choose answers to questions Tabak asked, including "How many legs does an arachnid have? How many institutes make up the NIH? Which human organ cleans up to 50 gallons of blood



As usual NIH's unique blend of Earth Day and Take Your Child to Work Day celebrations proves to be a winner. Presenters as well as participants enjoy the event (from l): A great horned owl sits on the arm of a park ranger from the Maryland Department of Natural Resources; Kevin Zhang (l) and Chayse Jackson get a feel for eye anatomy at an NEI exhibit; and Tessa Older makes a mold of an animal brain.



Hunt and #MyNIHDay. In between TYCWD activities, youngsters could walk over to tents on Bldg. 1's lawn and take part in Earth Day events. Attendees learned about wildlife both on and off campus and how to live a sustainable lifestyle.

The Maryland Department of Natural Resources set up a display that featured reptiles and several birds of prey, including a great horned owl. Attendees were also invited to go on a nature walk to the NIH stream. Other exhibits taught

CONTINUED ON PAGE 10

every day? Borborygmus is another word for...?" Kids selected the correct answers 85 percent of the time. Tabak noted, "Next year we need much harder questions."

The Bug Doctor Is in the House, presented by Dr. Sally Rockey, NIH deputy director for extramural research, informed and entertained kids and parents. It included a discussion about the importance of insects in our world and a live-insect show and tell. Rockey unboxed a walking stick insect, a lubber grasshopper and a Madagascar hissing cockroach, passing them to the kids to handle. The children were fascinated; the parents not so much.

Several other OD hands-on events were hosted, including: Facts about Earth Day; Out-break! Decision-Making to Protect the Population; Show Me the Money; Lights, Camera, Action! Be a Star for NIH!; Monster Genes, the ABCs of Acid-Base Chemistry and Color-Changing Carnations; Mix It Up with Cabbage; the World's Easiest Lava Lamp; and Candy Chromatography: Having Fun with Fluorescence.—Elise Rabin

4 Years for 3 Blind Mice at TYCW Day

2015 marked the fourth year the 3 Blind Mice—an independent blind and low-vision resource sharing group open to all interested NIH staff—participated in Take Your Child to Work Day.

The group presented an event titled Sensory Showdown!, an assortment of activities focused on using senses other than sight. The Mice hosted three 1-hour sessions. Activities included:

■ **Guide Dog Demo:** Guide dogs give a new meaning to man's best friend. Kids learned how the unique partnership between owner and guide dog, in combination with other senses, provides independence and mobility for many in the blind and low-vision community.

■ **Tactile Treasure Hunt:** Touch is particularly important to those who are blind or have low-vision. Texture, size, shape and material are some examples of indicators that help to decipher one object from another. Children reached inside a box to tell the difference between similar objects using only the sense of touch.

■ **Sent Sense:** From an aromatic meal, to springtime flowers, to sour milk and smoke, smell is an important indicator of the world around us. Guests explored and identified a variety of objects using only their sense of smell.

There were also activities called Audio Description, Test Your Taste Buds and Braille Decoder. For more information about 3 Blind Mice, contact Teresa (Shea) Booher at (301) 402-3855 or teresa.shea@nih.gov.



Cynthia Bryant and her guide dog Sophia educate children at TYCWD.



Above, from l:

A participant at Take Your Child to Work Day looks through a microscope.

Shahzad Brandon walks on a treadmill with an overhead suspension system. The system provides physical support for patients who are relearning how to walk after an injury or disease. At right is his mom Zavera Brandon, a physical therapist in the rehabilitation medicine department.



CONTINUED FROM PAGE 9

attendees about conserving energy and water and how to compost.

Over in the Clinical Center, environmental short films aired in Masur Auditorium as part of Earth Day festivities.

Many of the merchants who sell produce and baked goods at the NIH Farmer's Market set up shop for the first time at this year's celebration.

FAES and the NIH Federal Credit Union donated 500 dogwood tree seedlings for attendees to plant at home.

Earth Day organizers also encouraged attendees to bring unused items, such as old eyeglasses and cell phones, and place them in recycling bins on campus.

Below:

NIDDK's James Welch demonstrates a precipitation reaction—what occurs when certain types of liquid form into a solid when they touch—as children look on.

PHOTOS: BILL BRANSON, JOSIE ANDERSON, JOE BALINTFY



NIMH Issues New Strategic Plan

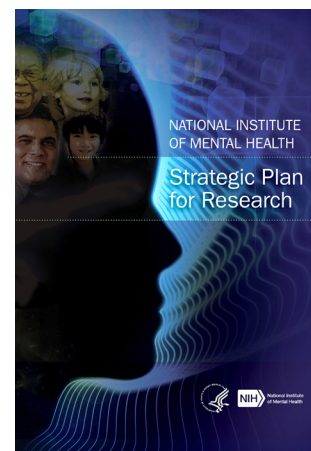
Against a backdrop of rapid scientific advances and dramatic changes in the landscape of mental health care, NIMH has issued a new *Strategic Plan for Research*. Informed by the successes and challenges of recent years, the new plan updates the strategic objectives of its 2008 predecessor with the aim of balancing the need for long-term investments in basic research with urgent mental health needs.

"A strategic plan can identify the most important problems and identify areas of traction," said NIMH director Dr. Thomas Insel. "This update of our strategic plan is a commitment to take a fresh look at our horizons so that we can refine priorities and energize our path of discovery."

According to recent estimates, mental illnesses account for 21.3 percent of all years lived with disability in the United States. An estimated 9.6 million American adults suffer from a serious mental illness in which the ability to function in daily life is significantly impaired. Furthermore, over 41,000 Americans died in 2013 from suicide, more than twice the annual mortality from homicide or AIDS. Changing these statistics depends not only on continued effort in areas in which there have been dramatic advances, but also in less fully explored areas, such as the mechanisms by which environmental influences alter brain and behavior, as well as in research to improve and broaden access to health care services.

A diverse community of stakeholders helped review and provide comments on the draft update of the plan. These include the National Advisory Mental Health Council and the NIMH Alliance for Research Progress, a gathering of the major foundations and mental health research advocacy groups.

The *NIMH Strategic Plan for Research* is available in print and can also be read at www.nimh.nih.gov/about/strategic-planning-reports/index.shtml.



Souped-Up Remote Control Switches Behaviors On and Off in Mice

Neuroscientists have perfected a chemical-genetic remote control for brain circuitry and behavior. This evolving technology can now sequentially switch the same neurons—and the behaviors they mediate—on and off in mice, say NIH-funded researchers. Such bidirectional control is pivotal for decoding the brain workings of complex behaviors. The findings are the first to be published from the first wave of NIH grants awarded last fall under the BRAIN Initiative.

“With its new push-pull control, this tool sharpens the cutting edge of research aimed at improving our understanding of brain circuit disorders, such as schizophrenia and addictive behaviors,” said NIH director Dr. Francis Collins.

Dr. Bryan Roth of the University of North Carolina, Chapel Hill, and Dr. Michael Krashes of NIDDK and colleagues debuted the second generation of the tool, called DREADD (Designer Receptors Exclusively Activated by Designer Drugs) on Apr. 30 in the journal *Neuron*.

DREADD 2.0 improves on a widely adopted technology developed by Roth, an NIMH grantee, and colleagues over the past decade. It achieves remote control by introducing a synthetic brain chemical messenger system that integrates with the workings of naturally occurring systems.

Researchers genetically engineer mice to have brains containing what are dubbed “designer receptors” in specific circuits. These are synthetic proteins on the surface of neurons that can only be activated by a matching synthetic chemical that otherwise has no biological effect—like a lock that can only be opened by a unique key. When the “designer drug” binds to its receptor, depending on its programming, it either triggers or blocks neuronal activity, thus giving researchers experimental control over the animal’s brain circuits and behaviors.

No Evidence to Change Current Transfusion Practices for Adults Undergoing Complex Cardiac Surgery

An NIH-funded study found no statistical difference in the primary clinical measure—which

assessed changes in function of six organs from before to 7 days after surgery—between complex cardiac surgery patients receiving transfusions of red blood cell units stored for short (up to 10 days) versus long (21 or more days) periods. These findings indicate there is no need to alter how hospitals currently transfuse blood in adults going through complex cardiac surgical procedures.

Results of the Red Cell Storage Duration Study (RECESS), supported by NHLBI, appeared Apr. 8 in the *New England Journal of Medicine*.

In the United States, red blood cell units can be stored up to 42 days after collection. Basic research has documented changes in red blood cell units the longer they are stored. Some studies, primarily observational, have found an association between the transfusion of blood stored for a longer duration and increased morbidity and mortality. However, the clinical significance of these findings is difficult to determine due to study-design limitations.

“RECESS contributes to a long-standing question about whether red blood cell storage duration impacts a patient’s clinical outcome after transfusion,” said Dr. Keith Hoots of NHLBI. “These findings are reassuring because they do not support the need to modify transfusion practices in adult patients undergoing complex cardiac surgery. In particular, there does not appear to be something gained by only transfusing red blood products stored for 10 days or less.”



Study Defines Brain, Behavioral Effects of Teen Binge Drinking

Adolescent binge drinking can disrupt gene regulation and brain development in ways that promote anxiety and excessive drinking behaviors that can persist into adulthood, according to a new study supported by NIAAA. A report of the study, conducted in animals by researchers at the University of Illinois at Chicago College of Medicine, appeared online in the journal *Neurobiology of Disease*.

“These findings are an important contribution to our understanding of the alcohol-induced brain changes that make alcohol problems in adulthood more likely among young people who abuse alcohol,” said NIAAA director Dr. George Koob.

Previous studies have shown that people who start drinking before the age of 15 are four times more likely to meet the criteria for alcohol dependence at some point in their lives; young people consume more than 90 percent of their alcohol by binge drinking.

Town Hall Meeting on Workforce Diversity, June 9

You are invited to attend a town hall meeting with Dr. Hannah Valentine, chief officer for scientific workforce diversity, and Debra Chew, director, Office of Equity, Diversity and Inclusion, for all NIH employee resource group members and those interested in the topic. It will be held on Tuesday, June 9 from 1 to 2:30 p.m. in Bldg. 49, Rm. 1A51/1A59. For more information or to submit questions/comments, email COSWD@mail.nih.gov. For special accommodations, call Trish Flock or Julia Casselle at (301) 451-4296.

milestones



Jo Pelham, who retired after 50 years at NIH, wears a unique pin that few others can wear.

Pelham Retires After Golden Anniversary At NIH

By Paula Whitacre

Jo Pelham, who retired recently as a scientific review officer in the Center for Scientific Review, has a unique piece of jewelry that few people can rightly wear—designed by her husband, it links her 10-, 20-, 30-, 40- and 50-year service pins into a circle, honoring 50 years at NIH.

Pelham joined NIH in 1964 as a chemist in the National Institute of Arthritis and Metabolic Diseases (now NIDDK). Her career encompassed intramural research, program, council and review. “NIH is a great place to work,” she said. “I could change careers without changing employers.”

Growing up in the central Pennsylvania town of DuBois, Pelham planned to become a nurse, following the lead of a cousin. “But when I was 16, I worked at the local hospital and realized it wasn’t for me,” she said.

Instead, she earned a B.S. in chemistry at Mercyhurst College. After graduation, Pelham and two friends looked for jobs in Washington. She followed up on a family friend’s suggestion to look at NIH. At the time, each institute had its own personnel office and she walked from office to office to apply in person. “Hard as it is to believe, they let me start on a temporary basis until my paperwork came through,” she said.

In 1971, Pelham moved to the National Cancer Institute, first in a lab, then as a program analyst. From 1984 to 1988, she was assistant to the executive secretary of the National Cancer Advisory Board. She also coordinated review of conference grant applications.

When she realized how much she enjoyed review, she sought a position as executive secretary (now SRO) with the Division of Research Grants (now CSR). “It’s the best job at NIH, as far as I’m concerned,” she said. “I loved the interaction with the outside community.” In her 28 years in DRG/CSR, she ran 5 study sections. In 2004, she helped establish the musculoskeletal rehabilitation sciences (MRS) study section, which she ran until her retirement.

MRS is challenging, according to Dr. Rajiv Kumar, chief of the musculoskeletal, oral and

skin sciences integrated review group, because it reviews diverse subject areas, sends applications to 12 institutes and deals with 8 grant mechanisms. “She handled it extremely well,” he said. “She came to know all the players in the field, both reviewers and the applicants.”

“She was absolutely beloved by the folks in her area,” agreed Dr. Daniel McDonald, SRO of the skeletal biology structure & regeneration study section, with whom she worked for about two decades.

Pelham chaired the CSR training committee and the trans-NIH extramural associates committee. The latter program helped faculty at small schools learn the NIH review process. As a graduate of a small, all-female college, Pelham said she particularly enjoyed mentoring the people who came through the program.

Pelham has a calm, clear voice, well-suited for her volunteer position as a reader for people who are blind or dyslexic. Through Learning Ally, she reads aloud in a recording studio, usually materials needed for work or study.

Retirement plans include exploring the Washington area. “I’m thinking of getting off at a Metro stop, then exploring what’s in the neighborhood around it,” she said. As she did throughout her career, Pelham will fully explore the possibilities and learn all she can.

Pharmacist Sillers Retires After More Than 30 Years

Karen Sillers, a pharmacist in the Division of Veterinary Resources within the Office of Research Services, plans to retire in May after more than 30 years of service to NIH.

She has been the pharmacist for the NIH Animal Care Program for the last 20 years and established the first pharmacy dedicated to providing drugs and medications for animals used in biomedical research at NIH.

Sillers received her B.S. in pharmacy from the University of Maryland in Baltimore and shortly after passed the pharmacy board. Little did she know, after participating in a 1-month clinical internship in the Clinical Center Pharmacy, that she would dedicate over three decades of service to NIH and its mission.



In 1982, she was hired as a staff pharmacist in the CC Pharmacy and spent the next 5 years exploring every department within the CC—unit dose, IV additive, outpatient, pediatric oncology satellite—and served as a clinical pharmacist to NICHD. According to Sillers, “The ability to learn something new every day I came to work—that was the great draw that kept me at NIH.”

After 5 years of rotating through CC departments, she was placed in charge of the compounding & packaging unit and inpatient controlled substance distribution. In 1995, she was offered a position with the Veterinary Resources Program as its first pharmacist, where she excelled. “As far as I can tell, I was the first veterinary pharmacist that specialized in lab animal medicine in the U.S.,” Sillers said. She enjoyed the challenge of building the VRP program (now DVR) from scratch and working with veterinarians who were just as passionate about animal care as she was.

Over the years, Sillers has provided expert advice on a wide variety of pharmacy topics in addition to providing oversight of controlled drugs for non-human use. She collaborated with veterinarians at the Office of Laboratory Animal Welfare, a group that oversees and ensures the humane care and use of research animals in Public Health Service-funded research, and influenced pharmaceutical care of lab animals on a national scale. She also assisted the Centers for Disease Control and Prevention in establishing its veterinary pharmacy program. Sillers also gained access to the Pharmacy Prime Vendor contract administered by Defense Supply Center of Philadelphia, which has provided significant savings in procurement of drugs and medications used in the treatment of lab animals over the years.

Beyond work at NIH, Sillers joined the Society of Veterinary Hospital Pharmacists. SVHP is an international organization composed of pharmacists who are passionate and dedicated to teaching and ensuring the ethical treatment of animal patients. As a member, she served as secretary from 2010 to 2014.

Although Sillers plans to retire from NIH, she’s considering yoga as a second career. She picked up yoga as a hobby in 2010 and experienced a huge mental shift that helped bring calmness and clarity to her life. With a new outlook on life, and determination, she completed her 200-hour yoga instruction training in July 2014 and hopes soon to share the power of control to manage day-to-day emotional stress with others.

NIGMS’s Zachary Says Farewell

By Jilliene Drayton

In pursuit of a career that offered a closer commute to home and to his wife, who at the time was expecting twins, Dr. Arthur “Zach” Zachary seized an opportunity 25 years ago to join NIGMS as an executive secretary in what was then the Office of Review Activities. Since that time, his sons graduated from college, his title changed from executive secretary to scientific review officer and ORA became the Office of Scientific Review. Another change recently took place in Zachary’s life—retirement.

Zachary earned a B.S. in biology from Brooklyn College in 1965 and an M.A. in marine science from the College of William & Mary in 1970. He spent the early years of his career in a variety of scientific positions, including high school science teacher, research assistant at the Virginia Institute of Marine Science and oceanography instructor at the United States Armed Forces Institute in Virginia.

Zachary went on to earn a Ph.D. in marine science/microbiology in 1975 from William & Mary, followed by several postdoctoral positions. His first faculty appointment was as a research assistant professor in the department of biological chemistry at the University of Maryland School of Medicine in Baltimore. Although his diverse research pursuits ranged from marine ecology to molecular biology, Zachary’s primary focus was in marine microbial ecology and bacteriophage biology.

He joined NIGMS in 1990, where his initial assignments included reviewing research training grant applications in the area of genetics. Years later, when NIGMS modified its review group structure, he became scientific review officer for grant applications in a variety of areas.

“Zach’s review responsibilities went well beyond research training, ranging from applications focused on the microbiome to systems biology to large-scale collaborative projects,” said Dr. Helen Sunshine, OSR chief. “During his time at NIGMS, he also made significant contributions to the review structure and process for Support of Competitive Research grant applications.”

Known to NIGMS colleagues for his innovative ideas, dedication to the institute’s training programs and sense of humor, Zachary was recognized by the scientific review community as a role model to both graduate students and senior-level investigators with whom he interacted. He even provided grant reviewers with hand-drawn abstract artwork that was relevant to the review.

Though he may one day have a promising future as an artist, a return to research or teaching is among the avid basketball player’s many possibilities. “I have to figure out my direction,” he said. “But for now, I want to enjoy having the freedom to do what I want.”



PHOTO: CHIDINMA OKPARANTA



Dr. Irene Eckstrand

Geneticist Eckstrand Retires After Long Career at NIGMS

By Jilliene Drayton

As a child, Dr. Irene Eckstrand scanned through her father's medical books, fascinated by how the intricately wired machine known as the human body operated. "I loved seeing how people's insides were connected, and I was interested in trying to reconstruct how things worked," she said. At the time, she didn't realize that her childhood obsession with the maps within us would lead to a career that included mapping how infectious diseases spread.

During her 33 years at NIGMS, Eckstrand handled a range of responsibilities that included managing grants on evolution and population genetics, leading a computational biology initiative and spearheading science education efforts.

As an undergraduate student at Earlham College in Indiana, Eckstrand initially aspired to become a middle- or high-school teacher. Interested in finding the answers to big and challenging scientific questions, she changed gears and decided to major in biology. Eckstrand went on to earn a B.A. from Earlham, followed by an M.S. in biology from Wright State University in Ohio and then a Ph.D. in zoology from the University of Texas.

She joined NIGMS in 1981 as a program administrator in what is now the Division of Genetics and Developmental Biology (GDB). "My research background was in population biology and evolutionary biology, and at that time NIH didn't support a lot of work in those areas," Eckstrand explained.

"During her time at NIGMS, Irene made a lasting impact with her ability to identify and nurture fields that were later shown to be critical to the missions of NIGMS and NIH," said Dr. Judith Greenberg, NIGMS deputy director and former GDB director.

Eckstrand's involvement in the early development of the Human Genome Project led to an assignment as an NIH liaison to the Department of Energy, which jointly managed the project with NIH.

She also served for 2 years as acting director of the NIH Office of Science Education (OSE), where she worked with professional societies, educational organizations and other groups on improving biology and mathematics education. "I took a detail position in OSE because I was always interested in education," said Eckstrand. "I felt there was a way to connect the kind of work we do here at NIH to the kind of things that students get excited about in science."

Later, Eckstrand played key roles in developing two NIH curriculum supplements, "Doing Sci-

ence" and "Evolution and Medicine." She also contributed to a number of scientific outreach efforts, including the USA Science & Engineering Festival, Take Your Child to Work Day and the Science Alliance, a program that helped train D.C. and Montgomery County teachers through partnerships with NIH scientists.

In addition to administering her genetics grant portfolios, Eckstrand coordinated a joint program with the National Science Foundation focused on the evolution of infectious diseases. From 1997 to 2004, she also managed the NIGMS Bridges to the Future Program, which helps students from underrepresented groups transition from associate to baccalaureate and from master's to doctoral programs in preparation for careers in scientific research. And she directed the Models of Infectious Disease Agent Study (MIDAS), which began in 2004 to apply computational and mathematical tools in modeling the potential spread of infectious diseases and the effect of various interventions.

"The success of MIDAS and the impact that this program has had in areas ranging from flu to Ebola are due largely to Irene's leadership and vision," said Dr. Susan Gregurick, director of the NIGMS division that houses the MIDAS program.

Eckstrand received many honors and awards, including an NIGMS Director's Award of Merit and an HHS Secretary's Award for Distinguished Service. Last fall, she was named a fellow of the American Association for the Advancement of Science.

In retirement, Eckstrand plans to spend time with her adult children, read books, garden and sing. "Retirement is a big transition, and I want to take some time to find my next calling," she said. "I'm just going to wait and see what sprouts. And I'm confident something will sprout."



NIDCD Mourns Loss of Hughes

Dr. Gordon Blackistone Hughes, clinical trials coordinator for the National Institute on Deafness and Other Communication Disorders since 2008, died sud-

denly on Feb. 15. He was 66.

A respected clinician, researcher and colleague, Hughes previously served for 28 years (1980-2008) on the faculty of the Cleveland Clinic Foundation in the department of otolaryngology and communicative disorders, section of otology and neurotology, before coming to NIDCD. He was appointed section head in 2001.

During his time at NIDCD, Hughes oversaw the development of a clinical trials program for the institute. He advised NIDCD staff and leadership and provided assistance to grant applicants in support of clinical trials in the areas of hearing, balance, taste, smell, voice, speech and language. His colleagues describe him as gentle, giving and insightful.

"Gordon was invaluable to our institute, to the broader NIH community and well beyond, to the research and clinical communities involved in the NIDCD mission areas," said Dr. Judith Cooper, NIDCD deputy director and director of the Division of Scientific Programs. "He was a wonderful colleague and will be terribly missed."

He was also a frequently quoted media spokesperson for NIDCD, appearing on NPR, the *New York Times* and, recently, the Associated Press.

Hughes was born in Pittsburgh and attended Mercersburg Academy in Mercersburg, Pa. He graduated from Dartmouth College with an A.B. degree in 1970 and received his M.D. from Case Western Reserve University School of Medicine in 1974. He then completed a fellowship in otology, neurotology and skull base surgery at the E.A.R. Foundation in Nashville.

Throughout his career, Hughes received numerous honors and awards. He was a recipient of both the Honor Award (1987) and the Distinguished Service Award (1996) of the American Academy of Otolaryngology-Head and Neck Surgery. He was an active member in the clinical and research community, serving on committees of several societies including the American Otological Society, American Neurotology Society and Association for Research in Otolaryngology. In addition, he served on the editorial boards for *Otology & Neurotology*, *The Laryngoscope* and *Ear, Nose and Throat Journal*.

He was most well-known for his textbook *Clinical Otology*, now in its fourth edition and widely praised as an excellent resource for all otolaryngologists and otologists. He had 72 peer-reviewed publications and numerous book chapters, editorials and presentations.

Beyond otology and clinical research, Hughes was dedicated to his family and heritage. He recently completed a book, *The Blackstones of Maryland Do Well Doubt Not*, on family history. He was an active member of All Saints Episcopal Church in Avenue, Md. He shared his love of the water and the game of soccer with many friends, family and colleagues.

Survivors include his wife, Myra, their son, Gordon Jr., his older brother, Mifflin, and his twin brother, Gerry.

In lieu of flowers, the family requests that memorial contributions be made to All Saints Episcopal Church, Oakley Rd., Avenue, MD 20609.



Disability Rights Advocate, Former NCMRR Deputy Director Gray Mourned

Dr. David B. Gray, former deputy director of NICHD's National Center for Medical Rehabilitation Research, passed away on Feb. 12. Gray, 71, also had served on NICHD's advisory council and was a professor of occupational therapy and neurology at Washington University School of Medicine in St. Louis.

"David played a crucial role in the establishment of the NCMRR," said NCMRR deputy director Dr. Ralph Nitkin, who worked with Gray. "In his position as a professor at Washington University School of Medicine, he was a strong advocate for the rights of

those with disability. He was a valued colleague and a good friend. He will be greatly missed."

Gray became a quadriplegic after he fell from the roof of his house in 1976. His own experience with medical rehabilitation led to his professional interest in the field.

He began working for NICHD in 1981. From 1982 to 1986, he was a health scientist administrator in the Mental Retardation and Developmental Disabilities Branch and the Human Learning and Behavior Branch. In 1986, he was appointed by President Ronald Reagan as director of the National Institute on Disability and Rehabilitation Research (NIDRR) in the U.S. Department of Education. (NIDRR had been called the National Institute of Handicapped Research, but Gray helped to change the agency's name.)

Gray returned to NICHD in 1987 and was involved in discussions about whether NIH should have a separate center for research on medical rehabilitation. In 1991, he was appointed acting deputy director of the newly created NCMRR, becoming deputy director in 1993. He left for a position at Washington University in 1995. Gray served NICHD again from 2003 to 2006, after he was appointed to the National Advisory Child Health and Human Development Council.

Among his many honors were the NIH Director's Award in 1993 and the NICHD Equal Employment Opportunity Special Achievement Award in 1990.

Gray helped make the Americans with Disabilities Act a reality and was present when President George H.W. Bush signed the landmark disability rights legislation into law. Throughout Gray's career he focused on creating environments to allow people with disabilities to participate in society.

He also helped establish the Accessible Health and Wellness Center in St. Louis, which promotes physical health and emotional wellness for people with disabilities, and to develop the participation and environment components of the International Classification of Functioning, Disability and Health.

Gray held a doctorate in psychology and genetics from the University of Minnesota.

His survivors include wife Margaret "Margy" E. Gray, son David W. Gray, daughters Elizabeth Gray and Polly Payne and two grandchildren. ☛

NIH Invests in Technology Upgrade to Support Research

By Erin O'Leary

(This is the first of a multi-part series exploring how technology enables NIH's mission.)

With more than 1,600 laboratories conducting basic and clinical research and more than 10,000 new patients in 2014, the Clinical Center supports a high volume of traffic, with researchers, health care providers, patients and visitors occupying almost 2.6 million square feet. Whether a person is visiting NIH for a day, a week, or is a permanent staff member, the ability to communicate medical information or complex research data is imperative.

As of February 2015, visitors and staff can share information faster and more reliably. The Clinical Center's NIH network connection is now at 10 times its former capacity.

According to Andrea Norris, CIT director and NIH chief information officer, NIH had not been able to keep up the technology infrastructure that facilitates the transport of data across the NIH network and the rest of the world.

"In numerous conversations with the scientific community, I learned more about their IT-related challenges," said Norris. "Slow network speeds topped the list."

Similar to the challenge facing the U.S. transportation infrastructure, funding for IT-related initiatives had not kept pace with rapid changes in biomedical and big data fields. NIH's data highway system (or NIH network) was in many cases overcrowded, unreliable and aging.

"I asked a [principal investigator] how he sent large data files to his colleagues," she said. "He pointed to his shoes and replied 'Sneaker-net.' Modernizing the NIH network quickly became a high priority."

NIH leaders recognized the effort required critical investment.

"Complex multi-year initiatives such as modernizing the network and adding to our high-performance computing capabilities require strong leadership commitment and support," Norris said. "We are so fortunate NIH leadership appreciates the importance of a technology infrastructure that supports our scientific mission."

By working with the scientific community to discuss current expectations and future technology needs, a plan to improve the network's security, reliability and transfer capabilities began, followed by the expansion of computa-

tional and storage capacity to meet NIH's high-performance computing (HPC) demands.

In 2014, the first key piece of the infrastructure, or the NIH network core, was upgraded to accommodate 10 times its capacity, or to 100+ Gbps. The modernized NIH network provides a "science DMZ" designed for high-performance applications and big data and a faster, 100 Gbps-capable network connection from NIH to Internet2 (a community of U.S. and international researchers, academics and scientists who collaborate via networking technologies) was implemented.

As of May 2015, 17 facilities are upgraded, including major data throughput centers such as Bldgs. 30, 35, 49 and NCI's 9609 Medical Center Drive. This effort included improvements to the Clinical Center's main network input channel (10 to 100 Gbps) and within the building's local area network (1 to 10 Gbps).

To meet biomedical demands, a concerted effort began in February 2014 to augment NIH's HPC infrastructure. To date, NIH's HPC capabilities have increased: 45 percent in computing capacity and 25 percent in data storage capacity, plus a 100 Gbps upgrade to the path between the HPC infrastructure and the NIH network.

"The impact has already been realized," said Norris. "Early reports are data transfers are reducing by a factor of 4, which allows our research community to instead focus on their mission critical work instead of workarounds related to the network." 📺



Andrea Norris, CIT director and NIH chief information officer, held a number of conversations with the scientific community about their IT challenges. The verdict? "Slow network speeds topped the list," she said.



NIDA's Drug Facts Week Materials Reach Egypt

Thanks to a partnership with a former NIDA Hubert H. Humphrey drug abuse fellow, hundreds of students in Egypt are reading NIDA materials designed for teens to discuss scientific facts about drug abuse and addiction. The students celebrated National Drug Facts Week and held events at more than a dozen schools and youth clubs, led by three addiction specialist psychiatrists, three adolescent psychiatrists and a team of social workers from Alabassiya Hospital, the most recognized psychiatry hospital in Egypt. The students above attended an NDFW event at the Helmeiet el Zatoon youth club in Cairo. The next National Drug Facts Week begins Jan. 25, 2016. To see press coverage and event photos from more than 1,500 events around the country and internationally in 2015, go to <http://teens.drugabuse.gov/national-drug-facts-week>.